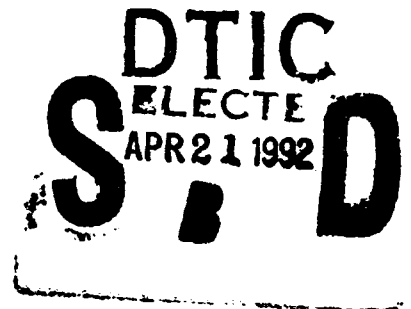WRDC-TR-90-8007
Volume VIII
Part 43

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INTEGRATED INFORMATION SUPPORT SYSTEM (IISS)
Volume VIII - User Interface Subsystem
Part 43 - Electronic Documentation System (EDS) Layout Editor Unit
Test Plan

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Integration Technology Services
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Fairborn, OH 45324-6209

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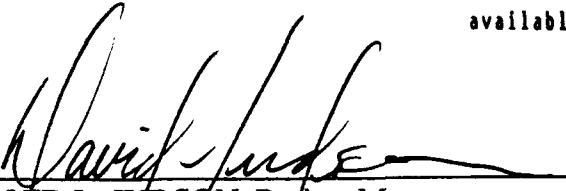Final Report for Period 1 April 1987 - 31 December 1990

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This technical report has been reviewed and is approved for publication.

This report is releasable to the National Technical Information Service (NTIS). At NTIS, it will be available to the general public, including foreign nations

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DATE 25 July 91

FOR THE COMMANDER:

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This unit test plan establishes the methodology and procedure to be used to test the capabilities of the Electronic Documentation System (EDS) Layout Editor computer program.

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FOREWORD

This technical report covers work performed under Air Force Contract F33600-87-C-0464, DAPro Project. This contract is sponsored by the Manufacturing Technology Directorate, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. It was administered under the technical direction of Mr. Bruce A. Rasmussen, Branch Chief, Integration Technology Division, Manufacturing Technology Directorate, through Mr. David L. Judson, Project Manager. The Prime Contractor was Integration Technology Services, Software Programs Division, of the Control Data Corporation, Dayton, Ohio, under the direction of Mr. W. A. Osborne. The DAPro Project Manager for Control Data Corporation was Mr. Jimmy P. Maxwell.

The DAPro project was created to continue the development, test, and demonstration of the Integrated Information Support System (IISS). The IISS technology work comprises enhancements to IISS software and the establishment and operation of IISS test bed hardware and communications for developers and users.

The following list names the Control Data Corporation subcontractors and their contributing activities:

SUBCONTRACTOR	ROLE
Control Data Corporation	Responsible for the overall Common Data Model design development and implementation, IISS integration and test, and technology transfer of IISS.
D. Appleton Company	Responsible for providing software information services for the Common Data Model and IDEF1X integration methodology.
ONTEK	Responsible for defining and testing a representative integrated system base in Artificial Intelligence techniques to establish fitness for use.
Simpact Corporation	Responsible for Communication development.
Structural Dynamics Research Corporation	Responsible for User Interfaces, Virtual Terminal Interface, and Network Transaction Manager design, development, implementation, and support.
Arizona State University	Responsible for test bed operations and support.

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Accession For

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Justification

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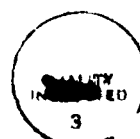
SECTION 1

GENERAL

1.1   Purpose

This Unit Test Plan (UTP) establishes the methodology and procedures used to adequately test the capabilities of computer program identified as the EDS Layout Editor. The Layout Editor (LE) is one configuration item of the Integrated Information Support System (IISS) Electronic Documentation System (EDS).

1.2   Project References

[1]   Systran, ICAM Documentation Standards , IDS150120000C, 5 September 1983.

[2]   International Organization for Standardization, Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML) , ISO 8879, 15 October 1986.

[3]   International Organization for Standardization, Office Document Architecture/Office Document Interchange Format , ISO/DP 8613/1-6, October 1985 (Draft).

[4]   American National Standards Institute, American National Standard for Information Systems - Computer Graphics - Metafile for the Storage and Transfer of Picture Description Information , ANSI X/3.122-1986, August 27, 1986.

[5]   Structural Dynamics Research Corporation, Form Processor User's Manual , UM 620244200A, 16 February 1987.

[6]   Structural Dynamics Research Corporation, Virtual Terminal Operator Guide , OM 620244000A, 16 February 1987.

[7]   M.E. Lesk, LEX - Lexical Analyzer Generator. IS Workbench for VAX/VMS Programmers Guide .

[8] Structural Dynamics Research Corporation, Form Processor Development Specification , DS 620244700A, 16 February 1987

1.3 Terms and Abbreviations

American Standard Code for Information Interchange (ASCII) : The character set defined by ANSI x3.4 and used by most computer vendors.

Attribute : A characteristic used to qualify an element within a document.

Character Set : A mapping of a character repertoire onto a code set such that each character is associated with its coded representation.

Compound Document : A document which may contain mixed content (text, graphics, etc.).

Computer Graphics Metafile (CGM) : A standard file format for the storage and retrieval of picture description information.

Computer Program Configuration Item (CPCI) : An aggregation of computer programs or any of their discrete portions, which satisfies an end-use function.

Conforming SGML Application : An SGML application that requires documents to be conforming SGML documents, and whose documentation meets the requirements of this International Standard.

Context-Directed Editor : An EDS application which guides the user through the process of document creation and revision by using the document type definition as a model for which logical elements may be included in the document.

Descriptive Markup : Information added to a document that enables an application program to process the document.

<u>Document Type Definition (DTD)</u> : Rules determined by an application that apply SGML to the markup of documents of a particular type. A document type definition includes a formal specification, expressed in a document type declaration, of the element types, element relationships and attributes, and references that can be represented by markup. It thereby defines the vocabulary of the markup for which SGML defines the syntax. A DTD can also include comments that describe the semantics of elements and attributes, and any application conventions.

<u>Electronic Documentation System (EDS)</u> : An integrated set of software tools and application programs which operate upon a document through various stages of a document life cycle consisting of editing (creating/revising), formatting, imaging, storage, and transfering.

<u>Element</u> : A component of the hierarchical structure defined by a document type definition; it is identified in a document instance by descriptive markup, usually a start-tag and end-tag.

<u>Element Declaration</u> : A markup declaration that contains the formal specification of the part of an element type definition that deals with the content and markup minimization.

<u>Entity</u> : A collection of characters that can be referenced as a unit.

<u>Entity Declaration</u> : A markup declaration that assigns an SGML name to an entity so that it can be referenced.

<u>Entity Reference</u> : A reference that is replaced by an entity.

<u>Field</u> : Two-dimensional space on a terminal screen.

<u>Form</u> : A structured view which may be imposed on windows or other forms. A form is composed of fields. These fields may be defined as forms, items, or windows.

Form Definition (FD) : Form definition Language after compilation. It is read at run-time by the Form Processor.

Form Definition Language (FDL) : The language in which electronic forms are defined.

Form Editor (FE) : A subset of the IISS User Interface that is used to create definitions of forms. The FE consists of the Forms Driven Form Editor and the Forms Language Compiler.

Form Hierarchy : A graphic representation of the way in which forms, items, and windows are related to their parent form.

Form Language Compiler (FLAN) : A subset of the FE that consists of a batch process that accepts a series of form definition language statements and produces form definition files as output.

Form Processor (FP) : A subset of the IISS User Interface that consists of a set of callable execution-time routines available to an application program for form processing.

Forms Driven Form Editor (FDFE) : A subset of the FE which consists of a forms-driven application used to create Form Definition files interactively.

Generic Identifier : A name that identifies the element type of an element.

GI : Generic Identifier.

IISS Function Screen : The first screen that is displayed after logon. It allows the user to specify the function to access and the device type and device name on which to work.

Integrated Information Support System (IISS) : A test computing environment used to investigate, demonstrate, and test the concepts of information management and information integration in the context of Aerospace Manufacturing. The IISS

addresses the problems of integration of data resident on heterogeneous data bases supported by heterogeneous computers interconnected via a Local Area Network.

Item : A non-decomposable area of a form in which hard-coded descriptive text may be placed and the only defined areas where user data may be input/output.

Layout Style : The specification of format and presentation for logical elements.

Layout Structure : The hierarchy of all layout elements (pages, frames, blocks, etc.) for a document.

Logical Structure : The hierarchy of all logical elements (paragraphs, sections, etc.) within a document.

Markup : Text that is added to the data of a document in order to convey information about it.

Markup Minimization : A feature of SGML that allows markup to be minimized by shortening or omitting tags, or shortening entity references.

Message : Descriptive text which may be returned in the standard message line on the terminal screen. Messages are used to warn of errors or provide other user information.

Message Line : A line on the terminal screen that is used to display messages.

Operating System (OS) : Software supplied with a computer which allows it to supervize its own operations and manage access to hardware facilities such as memory and peripherals.

Page : Instance of forms in windows that are created whenever a form is added to a window.

Paging and Scrolling : A method which allows a form to

contain more data than can be displayed at one time with provisions for viewing any portion of the data buffer.

   Parser : An application program that determines how closely a document conforms to a document type definition which defines a specific documentation standard.

   Physical Device : A hardware terminal.

   Previous Cursor Position : The position of the cursor when the previous edit command was issued.

   Qualified Name : The name of a form, item, or window preceded by the hierarchy path so that it is uniquely identified.

   Standard Generalized Markup Language (SGML) : A language for describing document structures, consisting of descriptive markup which is added to a document to indicate where logical elements such as sections and paragraphs begin and end.

   Subform : A form that is used within another form.

   Tag : Descriptive markup indicating the start or end of a logical element.

   Tagger : An application program which provides a mechanism for automatically tagging existing documents which have been created by word processing systems.

   User Interface (UI) : IISS subsystem that controls the user's terminal and interfaces with the rest of the system. The UI consists of two major subsystems: The User Interface Development System (UIDS) and the User Interface Management System (UIMS).

   User Interface Management System (UIMS) : The run-time UI. It consists of the Form Processor, Virtual Terminal, Application Interface, the User Interface Services, and the Text Editor.

User Interface Services (UIS) : A subset of the IISS User
Interface that consists of a package of routines that aid users
in controlling their environment. It includes message
management, change password, and application definition services.

User Interface/Virtual Terminal Interface (UI/VTI) :
Another name for the User Interface.

Virtual Terminal (VT) : A subset of the IISS User Interface
that performs the interfacing between different terminals and the
UI. This is done by defining a specific set of terminal features
and protocols which must be supported by the UI software which
constitutes the virtual terminal definition. Specific terminals
are then mapped against the virtual terminal software by specific
software modules written for each type of real terminal
supported.

Virtual Terminal Interface (VTI) : The callable interface
to the VT.

Window : Dynamic area of a terminal screen on which
predefined forms may be placed at run-time.

Window Manager : A facility which allows the following to
be manipulated: size and location of windows, the device on which
an application is running, the position of a form within a
window. It is part of the Form Processor.

SECTION 2

DEVELOPMENT ACTIVITY

2.1 Statement of PreTest Activity

During system development, the computer programs were tested progressively. Functionality was incrementally tested, and as bugs were discovered by this testing, the software was corrected.

All pretest activity was conducted by the individual developer in a manual mode. The developer would enter inputs to the Layout Editor forms and manually inspect that the correct parameters were written to the Document Profile file which is the output of the Layout Editor. Based on the parameter values contained in the Document Profile, the developer could determine if the program had run correctly. Any errors were noted by the developer, and corrections to the Layout Editor were then made. The Layout Editor was then re-run insure that the program was correct.

2.2 Pretest Activity Results

The results of the pretest activity were that most of the coding errors were discovered prior to the release date. By using the Electronic Documentation System to produce all the Unit Test Plans for EDS, a number of small errors were uncovered that would have only shown up in the production of large multipage documents.

SECTION 3

SYSTEM DESCRIPTION

3.1   Svstem Description

The EDS Layout Editor is a forms-based application program
that enables a user to define the layout style of logical
elements delimited by SGML tags within a document. The input to
the Layout Editor consists of a Document Type Definition (DTD)
file created by the DTDBLD application program. The DTD defines
what logical elements are valid within a document and how many
times these logical elements may occur. The Layout Editor
enables the user to define (through the use of forms) a set of
formatting parameters that will be applied to a specific logical
element when the document is formatted by the Document Formatter.
These formatting parameters are saved in a file called the
Document Profile.

In addition to being able to define a layout style for
specific logical elements within a document, the Layout Editor
also enables the user to define a set of global formatting
attributes and to define header and footer blocks. Header and
footer blocks are normally used to put page numbering, document
titles, and dates on each page of the document as it is being
printed.

The block diagrams contained in Figures 3-1 and 3-2
illustrate the Layout Editor test configuration used in the Unit
Test Plan.

3-1
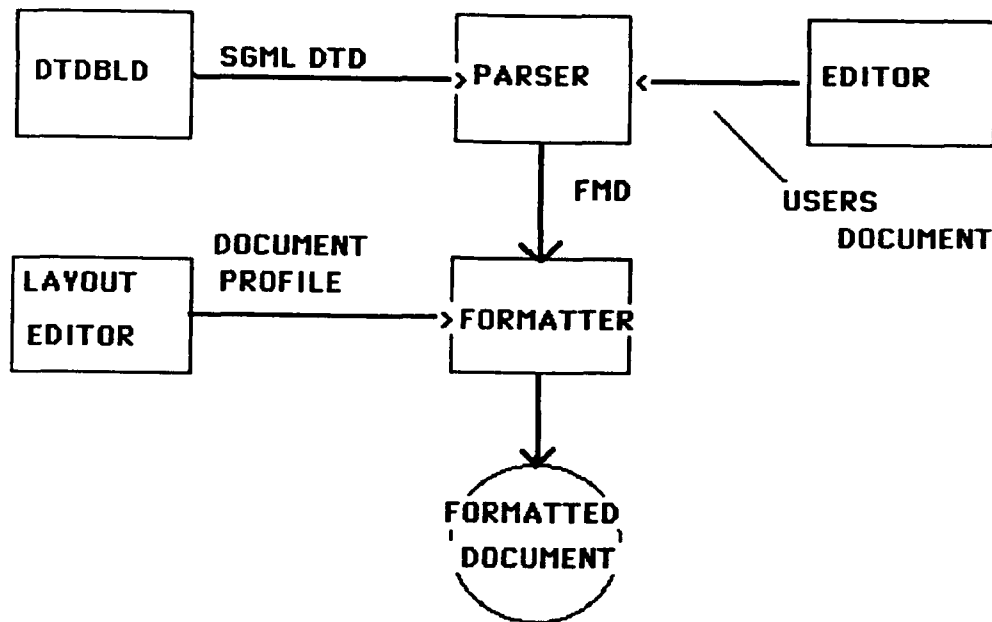
Figure 3-1 EDS Block Diagram
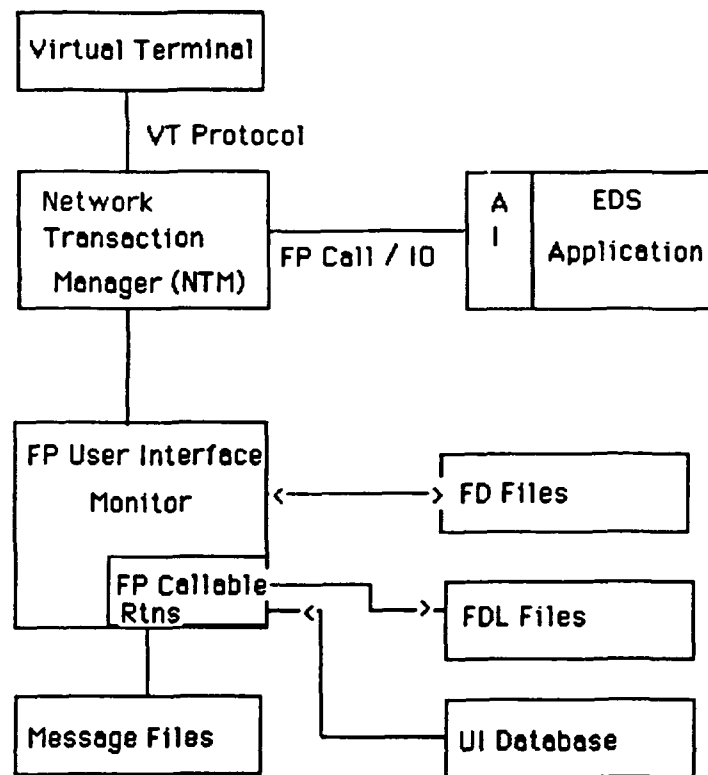
Figure 3-2 UIMS Block Diagram

3.2   Testing Schedule

Since EDS application programs use the Forms Processor (FP)
and the Network Transaction Manager (NTM) subsystems, both the FP
and NTM must be tested before EDS application program Unit Test
Plans can be run.

The execution of the Layout Editor is dependent upon the EDS
DTDBLD application program since the Layout Editor uses the
Document Type Definition created by DTDBLD as input. Testing of
the Layout Editor must be done only after the DTDBLD application
has been sucessfully tested.

3-3

3.3   <u>First Location Testing</u>

These tests of the Layout Editor require the following:

Equipment: Air Force VAX, terminals supported by the Virtual Te
as listed in the UI Terminal Operator's Guide.

Support Software: the Integrated Information Support System, C
libraries.

Personnel: one integrator familiar with both IISS and EDS.

Training: the EDS user manual has been previously delivered.

Deliverables: the EDS Layout Editor CPCI.

Test Materials: all tests may be run interactively by inputting
appropriate data and observing the output as outlined in this te
A script file has been created to run each test plan and save
the resulting output for comparison in future tests.

Security Considerations: None.

3.4   <u>Subsequent Location Testing</u>

The requirements listed above must be met.

SECTION 4

SPECIFICATIONS AND EVALUATIONS

4.1   Test Specification

The Unit Test Plan is based on covering specific
functionality of the Layout Editor outlined in the Electronic
Documentation System Development Specification (DS).

The objective of the Layout Editor Unit Test Plan is to
insure that all formatting parameters input by the user are saved
correctly in the Document Profile. To achieve this objective,
the formatting parameters are first entered into the various
forms, the Document Profile is saved (written to disk), and then
the formatting parameter forms are redisplayed and checked
against the input parameter forms to make sure they match. The
matching of these forms validates that the Document Profile has
been correctly written.

The following chart has the functional requirements as
outlined in the EDS DS listed vertical and the test activities in
the UTP that demonstrate the testing of each functional
requirements listed horizontally.

Test Codes

Func Req.	A	B	C	D	E
Define Page Parms	X				
Define Format Attr.		X			
Define Header/Footer			X		
Copy Document Profile				X	
Delete Document Profile					X

Figure 4-1   Matrix Mapping of Requirements with Test Plan

The following list has the test name followed by the list of figures that correspond to the test.

A   Figures 5-1 to 5-6
B   Figures 5-7 to 5-11
C   Figures 5-12 to 5-17
D   Figures 5-18 to 5-19
E   Figures 5-20 to 5-21

4.2   Testing Methods and Constraints

The tests outlined in Section 5.3 must be followed in the correct order. The required input is given for each test. This testing uses the normal mode of operation and does not test every possible code path that may generate an error. It assumes that the files and logical names detailed in Section 5.2 are available when the tests are run. It also assumes a proper IISS environment is available as described in Section 5.2. During the

development phase, error reporting due to missing files, incorrect logical names, and improper IISS environments was tested by the developer.

No data recording is required for the Layout Editor tests. It is suggested that upon further running of these tests, scripting of the unit test may be done and the output from running the script be saved for future testing. A script file for the Layout Editor test procedure is under Configuration Management and can be used if the tester does not want to manually key the data into the input forms.

No additional constraints are placed on this unit test besides those listed in Sections 3.3 and 5.2 of this document.

4.3   Test Progression

The test progression of the EDS Layout Editor is fully outlined in Section 5.3 of this Unit Test Plan. This progression should be followed exactly to insure sucessful testing.

4.4   Test Evaluation

The test results are evaluated by comparing the information returned on the redisplayed formatting attribute forms to that specified as succcessful for the given test. The tests check to make sure that as each Document Profile is created and saved, that the Document profile can be read in and the correct formatting attributes redisplayed. To speed up this testing and provide a more accurate measurement of success, scripting has been used. The test script file is EDSLE.SCP and is under IISS Configuration Management. If scripting is used, this file should be copied over to the test directory.

SECTION 5

TEST PROCEDURES

5.1   Test Description

A general description of this unit test was provided in Section 3.

5.2   Test Control

As outlined above, this unit test may be done manually or run using the supplied script files. In Section 5.3 the required input data is specified for each document profile to be built. The parameters on the redisplayed form should exactly match those on the input form. The order of testing is also completely specified. The test control information is completely described by the sequence of source input forms, output document profiles, redisplayed forms, and the test procedures outlined below. The success of each test may be determined by visually inspecting the redisplayed forms with those given in Section 5.3.

5.3   Test Procedures

To run the unit test plan as outlined in this section on a VAX, one must be logged onto a valid IISS account. The NTM must be up and running and the UI group logical names IISSFLIB, IISSMLIB, EDSDTLIB, EDSDPLIB, and EDSFMLIB must be assigned correctly. IISSFLIB points to the directory containing production form defintions (FD files). IISSMLIB points to the form containing error messages (.MSG files). EDSDTLIB points to the directory containing document type definitions (DTD files). EDSDPLIB points to the directory containing document profiles (DP files). EDSFMLIB points to the directory containing Font Metric definitions (AFM files).

Assuming the NTM is up and running, an IISS user may start this Unit Test Plan with the supplied script file as follows:

```
$ SET DEFAULT {directory containing your NTM environment}
$ VT100 -rEDSLE.SCP
```

This starts up the VT100 device driver with a source script as input. If the User Interface has been installed at your site with a different device driver, then this step is amended as appropriate. The tests then begin executing at the terminal.

If the user chooses to run this test manually, then the sequence of commands are as follows:

```
$ SET DEFAULT {directory containing your NTM environment}
$ VT100
```

When the IISS Logon Screen (Figure 5-1) is displayed, login to IISS with username/password/role of MORENC/STANLEY/MANAGER.

When the IISS Function Screen (Figure 5-2) is displayed, enter EDSLE as the specified function and press <ENTER>. This will start the EDS Layout Editor application program.

Once the input data for a particular Document Profile has been entered, go back to the Document Profile form using the <QUIT> key and use the Edit action (E) to re-display the formatting parameters of the Document Profile just edited. Make sure that the redisplayed data matches the input data shown in the corresponding input forms shown in the following figures.

```
+------------------------------------------------+
|                                                |
|                                                |
|          User ID: ▓ORENC▓▓▓▓                   |
|                                                ▌
|          Password:                             |
|                                                |
|             Role: ▓ANAGER▓                     |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
|                                                |
| MSG: ▓                            applcation   |
+------------------------------------------------+
```

Figure 5-1   IISS Logon Screen

5-3

```
+---------------------------------------------------------------+
|           I I S S   T E S T   B E D   V E R S I O N   2.3     |
| ------------------------------- ------------------------------|
| Date: 10/29/87    Time: 18:12:57     User ID: MORENC    Role: █MANAGER█ |
|                                                               |
| Function: █DSLE  █       Device Type: █       █     Device Name: █      █ |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
|                                                               |
| MSG: █                                            applcation  |
+---------------------------------------------------------------+
```

Figure 5-2   IISS Function Screen

Once the EDS Layout Editor application has started, the
following form is displayed.

```
┌─────────────────────────────────────────────────────────────┐
│     IISS Electronic Documentation System (EDS)    11/ 1/87  15:25:20 │
│                                                               │
│                      Layout Editor                            │
│                                                               │
│  Action  DTD Name    Document Profile       Description       │
│                                                               │
│     █    ▐DSUTP▌      ▐DSLE1▌      ▐DS LAYOUT EDITOR UTP    ▌ │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│ MSG: █                                          applcation    │
└─────────────────────────────────────────────────────────────┘
```

Figure 5-3   Document Profile Form

Enter the input data shown in Figure 5-3 to create a new
document profile named EDSLE1, press the <ENTER> key to go to the
next form.

5-5

```
┌──────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:26:08 │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│                          Menu                                  │
│                                                                │
│                      Page Setup                                │
│                      Generic ID Layout                         │
│                      Headers/Footers                           │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│ MSG: █                                          applcation     │
└──────────────────────────────────────────────────────────────┘
```
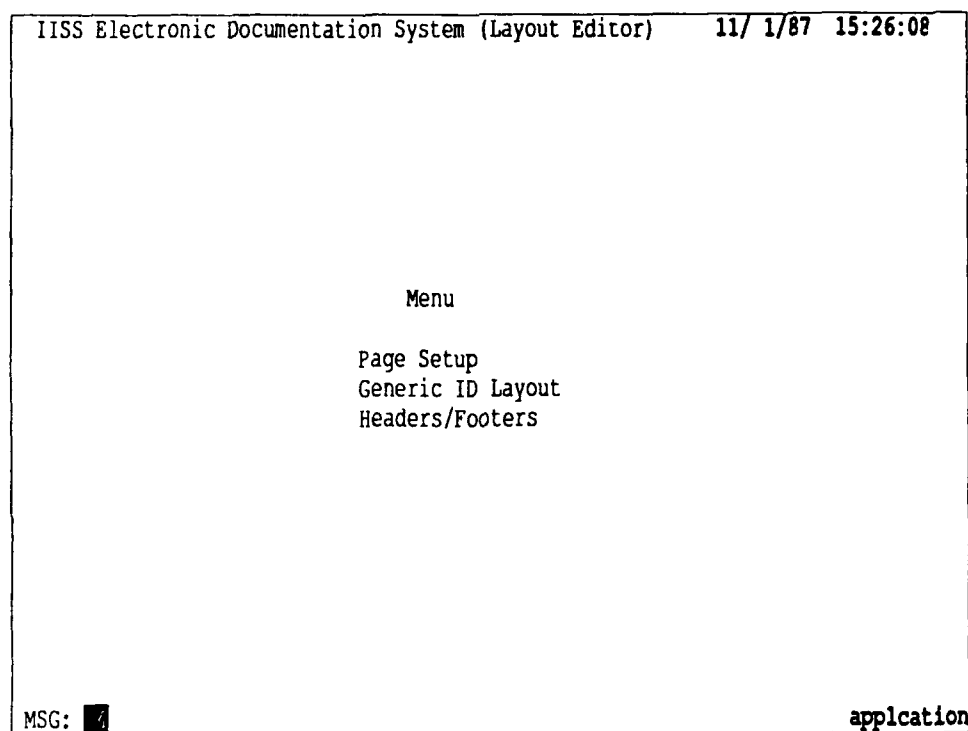
Figure 5-4   Formatting Parameter Menu

The cursor should now be sitting at the Page Setup menu
item. Press the <ENTER> key to go to the Page Setup form.

```
┌────────────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:26:19 │
│                                                                      │
│                                                                      │
│              Page Setup for Document Profile    EDSLE1               │
│                                                                      │
│                                                                      │
│ Margins                                                              │
│      Top        1.00  IN  Line Spacing  1.0█                         │
│      Bottom     1.00  IN  Leading       █                            │
│ (Even) Left     1.00  IN  Font Size     .2█                          │
│        Right    1.00  IN  Font Name     Courier                      │
│ (Odd)  Left     1.00  IN                                             │
│        Right    1.00  IN                                             │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
│ MSG: █                                              applcation       │
└────────────────────────────────────────────────────────────────────┘
```

Figure 5-5   Default Page Setup Parameter Form

This form shows the default page parameters used by the EDS Layout Editor.

Modify the page setup form using the parameters contained in Figure 5-6.

```
┌─────────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:26:19 │
│                                                                   │
│                                                                   │
│               Page Setup for Document Profile    EDSLE1          │
│                                                                   │
│                                                                   │
│   Margins                                                         │
│         Top       2.00  IN  Line Spacing   2.0                    │
│         Bottom    2.00  IN  Leading        (                      │
│   (Even) Left     2.00  IN  Font Size      4                      │
│         Right     2.00  IN  Font Name      Times-Roman            │
│   (Odd)  Left     2.00  IN                                        │
│         Right     2.00  IN                                        │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│   MSG:                                              application   │
└─────────────────────────────────────────────────────────────────┘
```

Figure 5-6   Completed Page Setup Form for Test A

Once all data items have been entered, press the <ENTER> key
to save the parameters and go back to the Parameters Menu by
pressing the <QUIT> key.   A message stating that the document
profile was written (to disk) should appear at the bottom of the
page setup form.

```
┌────────────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:26:08 │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
│                              Menu                                    │
│                                                                      │
│                         Page Setup                                   │
│                         Generic ID Layout                            │
│                         Headers/Footers                              │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
│ MSG: █                                                   applcation   │
└────────────────────────────────────────────────────────────────────┘
```
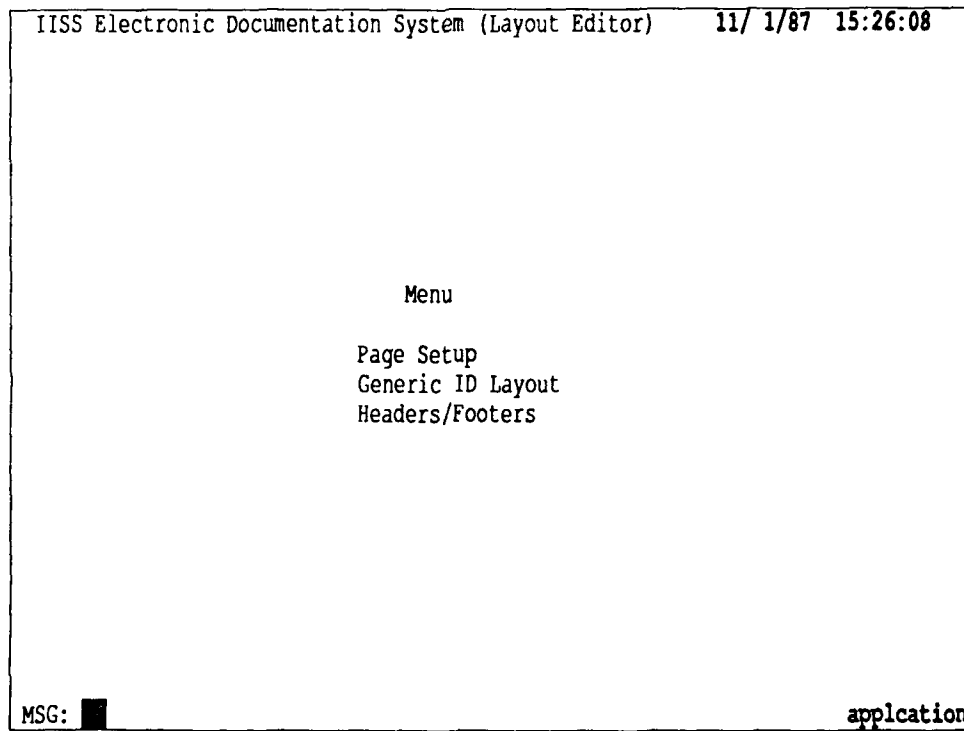
Figure 5-7   Formatting Parameter Menu

Now move the cursor to the Generic ID Layout menu item and
press <ENTER> to proceed to the Generic Layout form shown in
Figure 5-8.

```
┌─────────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 2/87  12:53:19 │
│                                                                   │
│                                                                   │
│                    DTD :  EDSUTP                                  │
│          Document Profile :  EDSLE1                               │
│                                                                   │
│                                                                   │
│          Fully Qualified Generic Identifier          Macro Name   │
│                                                                   │
│    EDSUTP                                              EDSU        │
│    EDSUTP.FIGURE                                       FIGUR       │
│    EDSUTP.REPORT                                       REPOR       │
│    EDSUTP.LIST                                         LIST        │
│    EDSUTP.LIST.I                                       I           │
│    EDSUTP.P1                                           P1          │
│    EDSUTP.P0                                           P0          │
│    EDSUTP.TEST                                         TEST        │
│    EDSUTP.TEST.TSTNO                                   TSTNO       │
│    EDSUTP.TEST.TSTNAM                                  TSTNAM      │
│                                                                   │
│                                                                   │
│                                                                   │
│  MSG:                                              applcation      │
└─────────────────────────────────────────────────────────────────┘
```

Figure 5-8   Generic ID Macro form

The cursor should be now sitting on the top macro name $EDSUTP. Press <ENTER> to proceed to the Formatting Parameter form shown below.

```
┌─────────────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:27:22 │
│                                                                       │
│                    DTD :  EDSUTP                                      │
│         Document Profile :  EDSLE1                                    │
│             Macro Name :  $EDSUTP                                     │
│                                                                       │
│                                                                       │
│ Bold       █   Justify              Vertical Space                    │
│ Underline  █      Center    █          Before     ▓   █               │
│ Reverse    █      Right      █          After      ▓   █              │
│ Italics    █      Full       █       Horizontal Space                 │
│                                         Before     ▓   █              │
│ No Break   █   Indent                   After      ▓   █              │
│ Literal    █      Left      ▓  █     Page Eject                       │
│ No Advance █      Right     ▓  █                                      │
│                   1st Line  ▓  █        Before     █                  │
│                                         After      █                  │
│                                                                       │
│                                                                       │
│ Font Size  █   Leading   █   PT(S)   Line Spacing   █   LI(S)         │
│                                                                       │
│ Font Name  ███████████████████████                                   │
│                                                                       │
│ MSG: █                                              application       │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 5-9   Blank GI Format Attribute Form

Enter the data values displayed in Figure 5-10 into the Formatting Parameter form and press <ENTER> to save the Document Profile.

5-11

```
┌─────────────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:29:02 │
│                                                                       │
│                    DTD :  EDSUTP                                      │
│         Document Profile :  EDSLE1                                    │
│              Macro Name :  $EDSUTP                                    │
│                                                                       │
│                                                                       │
│  Bold        █   Justify           Vertical Space                    │
│  Underline   █      Center    █       Before  .00  █                 │
│  Reverse         Right        █       After   .00  █                 │
│  Italics     █      Full      █    Horizontal Space                  │
│                                       Before  .00  █                 │
│  No Break    █   Indent               After   .00  █                 │
│  Literal            Left    .00 █  Page Eject                        │
│  No Advance  █      Right   .00 █                                    │
│                     1st Line .00 █     Before  █                     │
│                                        After   █                     │
│                                                                       │
│                                                                       │
│  Font Size   █   Leading   █    PT(S)   Line Spacing   .0  LI(S)      │
│                                                                       │
│  Font Name   [ourier_____]                         │
│                                                                       │
│  MSG: █ Field must contain only integer numbers          applcation  │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 5-10   Completed GI Format Attribute form for Test B

    When the Generic ID form (Figure 5-11) appears press <QUIT>
to return to the Parameters Menu shown in Figure 5-12.

```
IISS Electronic Documentation System (Layout Editor)    11/ 2/87  12:53:19


                    DTD :  EDSUTP
         Document Profile :  EDSLE1


         Fully Qualified Generic Identifier                    Macro Name

     EDSUTP                                                    EDSUTI
     EDSUTP.FIGURE                                             FIGURE
     EDSUTP.REPORT                                             REPORT
     EDSUTP.LIST                                               LIST
     EDSUTP.LIST.I                                             I
     EDSUTP.P1                                                 P1
     EDSUTP.P0                                                 P0
     EDSUTP.TEST                                               TEST
     EDSUTP.TEST.TSTNO                                         TSTNO
     EDSUTP.TEST.TSTNAM                                        TSTNAM




    MSG: ▮                                                     application
```

Figure 5-11   Generic ID Macro form

```
IISS Electronic Documentation System (Layout Editor)    11/ 1/87  15:26:08




                        Menu

                   Page Setup
                   Generic ID Layout
                   Headers/Footers







MSG: █                                              applcation
```

Figure 5-12 Formatting Parameter Menu

Now move the cursor to the Headers/Footers menu item and
press <ENTER> to go to the Header/Footer Parameter form shown in
Figure 5-13.

```
┌──────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   12/ 1/87   7:40:07 │
│                                                                │
│                                                                │
│                        Headers/Footers                         │
│                                                                │
│   (Function)    Define          Delete                         │
│   (Page Side)   Even            Odd              Both          │
│   (Position)    Top             Bottom                         │
│                                                                │
│                   List of Headers/Footers                      │
│                                                                │
│        Page Side          Header/Footer                        │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│                                                                │
│ MSG: █                                            applcation    │
└──────────────────────────────────────────────────────────────┘
```
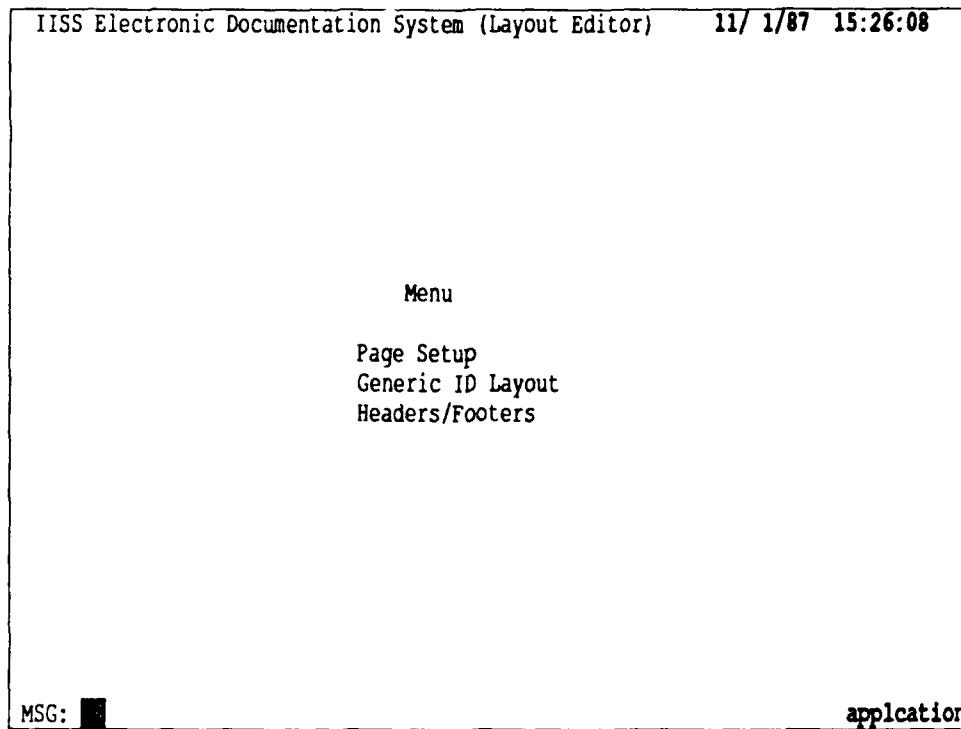
Figure 5-13   Headers/Footer Parameter Form

To get a blank Header/Footer form as shown in the next form press the <ENTER> key when the cursor is on the Define item, move the cursor using the <TAB> key to BOTH and then press <ENTER>, then finally move to the TOP item and press <ENTER>. This defines a Header block that will print on both sides of the page.
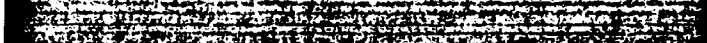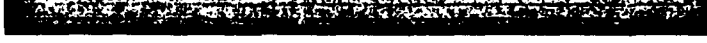
```
IISS Electronic Documentation System (Layout Editor)    11/ 1/87  15:29:42


                        Headers/Footers

     (Function)    Define           Delete
     (Page Side)   Even             Odd              Both
     (Position)    Top              Bottom

     from  Top                      Start      (at) TAG < ██████████ >
     From  Bottom
     Left  Margin                   Reset Page (at) TAG < ██████████ >
     Right Margin
   Style
     Center                         Right Justify
     Fontsize                       Underline
     Leading
     Fontname
   Text
     Line (1)
     Line (2)
     Line (3)

MSG: █                                                    applcation
```

Figure 5-14   Blank Header/Footer Form

     Fill in the data values as shown in Figure 5-15 below and
press <ENTER> to save them in the Document Profile.

```
┌─────────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:31:58 │
│                                                                   │
│                                                                   │
│                        Headers/Footers                            │
│                                                                   │
│      (Function)    Define          Delete                         │
│      (Page Side)   Even            Odd              Both           │
│      (Position)    Top             Bottom                          │
│                                                                   │
│      from  Top     1.00       Start      (at) TAG < section   >   │
│      From  Bottom  1.00                                           │
│      Left  Margin  1.00       Reset Page (at) TAG < section   >   │
│      Right Margin  1.00                                           │
│   Style                                                           │
│      Center               Right Justify                           │
│      Fontsize             Underline                               │
│      Leading     4                                                │
│      Fontname    ourier                                           │
│   Text                                                            │
│      Line (1)    est Line 1                                       │
│      Line (2)                                                     │
│      Line (3)                                                     │
│                                                                   │
│   MSG:                                              applcation     │
└─────────────────────────────────────────────────────────────────┘
```

Figure 5-15   Completed Header/Footer Form for Test C

Press the <QUIT> key to return to the Parameters Menu.

```
┌─────────────────────────────────────────────────────────────┐
│ IISS Electronic Documentation System (Layout Editor)   11/ 1/87  15:26:08 │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                            Menu                               │
│                                                               │
│                         Page Setup                            │
│                         Generic ID Layout                     │
│                         Headers/Footers                       │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│ MSG: █                                             applcation │
└─────────────────────────────────────────────────────────────┘
```
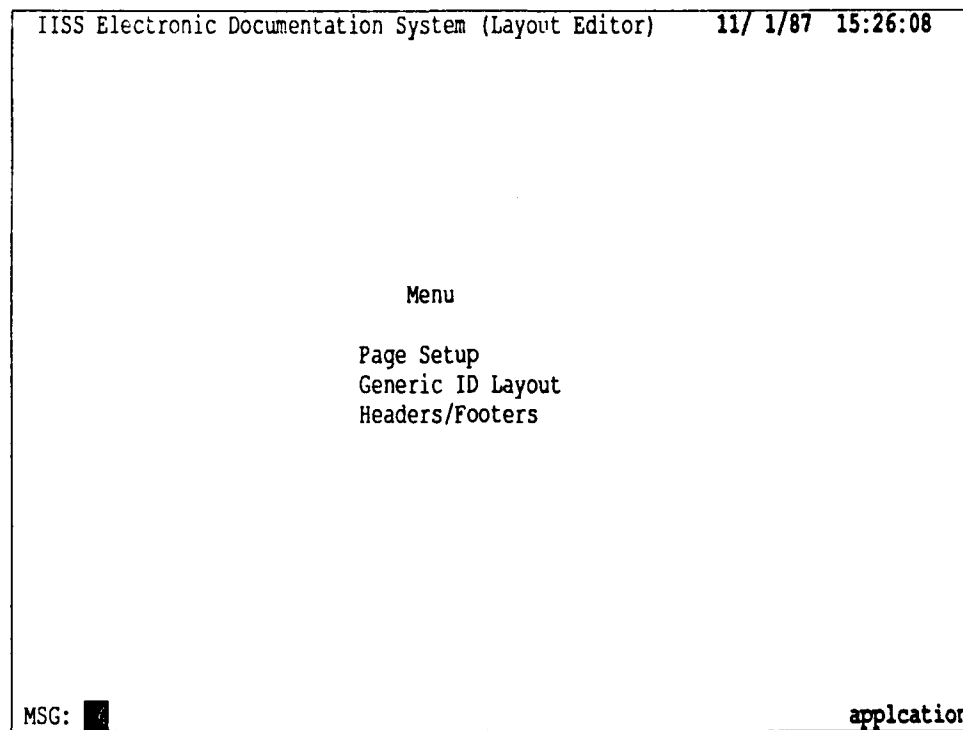
Figure 5-16   Formatting Parameter Menu

   Press <QUIT> again to return to the Document Profile form as
shown below in Figure 5-17. At this point the Document Profile
has been written to disk and the tester should use the Edit
action to redisplay each parameter screen above to verify that
the parameters have been correctly saved.

```
┌─────────────────────────────────────────────────────────────┐
│    IISS Electronic Documentation System (EDS)    11/ 1/87  15:32:24 │
│                                                               │
│                        Layout Editor                          │
│                                                               │
│  Action  DTD Name    Document Profile        Description      │
│                                                               │
│    █     ███████     ████████     ██████████████████████████  │
│                                                               │
│    █     EDSUTP      EDSLE1       ░DS LAYOUT EDITOR UTP        │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│                                                               │
│  MSG: █                                          applcation    │
└─────────────────────────────────────────────────────────────┘
```

Figure 5-17   Document Profile Form after Tests A,B,C

To complete the Unit Test Plan, the Copy and Delete commands must be tested. Using the <TAB> key, move the cursor to the line containing the EDSLE1 document profile. Enter C in the action field and the following form should be displayed.

5-19

```
┌──────────────────────────────────────────────────────────────────┐
│        IISS Electronic Documentation System (EDS)    11/ 6/87  15:35:46 │
│                                                                    │
│                          Layout Editor                             │
│                                                                    │
│  Action  DTD Name    Document Profile          Description         │
│                                                                    │
│    █      ████         ████        ████████████████████            │
│                                                                    │
│    █      EDSUTP       EDSLE1      DS LAYOUT EDITOR UTP             │
│                                                                    │
│                                                                    │
│                                                                    │
│          Source DP    Destination DP          Description          │
│                                                                    │
│          EDSLE1       DSLE2        OPY TEST (D)                     │
│                                                                    │
│                                                                    │
│                                                                    │
│  MSG: █                                            applcation       │
└──────────────────────────────────────────────────────────────────┘
```

Figure 5-18 Document Profile Copy - Test D

Enter a destination document profile name of EDSLE2 and press <ENTER> to copy document profile EDSLE1 to EDSLE2. After the copy has completed verify that the form looks as follows.

5-20

```
+-------------------------------------------------------------+
| IISS Electronic Documentation System (EDS)    11/ 6/87  15:36:26 |
|                                                             |
|                      Layout Editor                          |
|                                                             |
| Action  DTD Name    Document Profile        Description      |
|                                                             |
|    ▌     ▆▆▆▆▆         ▆▆▆▆▆      ▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆        |
|                                                             |
|    ▌    EDSUTP        EDSLE2      OPY TEST (D)               |
|    ▌    EDSUTP        EDSLE1      DS LAYOUT EDITOR UTP       |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
|                                                             |
| MSG: ▌                                         applcation   |
+-------------------------------------------------------------+
```

Figure 5-19   Document Profile Form after Test D

Now move the cursor to the line containing the document profile EDSLE2. Enter D into the action field, press <ENTER> and the following form should appear.

```
 ┌─────────────────────────────────────────────────────────────────┐
 │  IISS Electronic Documentation System (EDS)      11/ 6/87  15:36:26 │
 │                                                                   │
 │                         Layout Editor                             │
 │                                                                   │
 │  Action   DTD Name    Document Profile         Description        │
 │                                                                   │
 │     █      ▉▉▉▉       ▉▉▉▉           ▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉         │
 │                                                                   │
 │     █     EDSUTP      EDSLE2      ▉OPY TEST (D)▉▉▉▉▉▉▉▉▉▉▉▉      │
 │           EDSUTP      EDSLE1      ▉DS LAYOUT EDITOR UTP▉▉▉▉▉      │
 │                                                                   │
 │                                                                   │
 │                                                                   │
 │                                                                   │
 │                                                                   │
 │     OK to delete Document Profile ?  EDSLE2      YES  NO          │
 │                                                                   │
 │                                                                   │
 │  MSG: █                                              applcation    │
 └─────────────────────────────────────────────────────────────────┘
```

Figure 5-20   Document Profile Deletion - Test E

Move the cursor to YES, press <ENTER>, and the document profile should be deleted leaving a final form looking as follows

```
+--------------------------------------------------------------+
|    IISS Electronic Documentation System (EDS)    11/ 1/87  15:25:20 |
|                                                              |
|                        Layout Editor                         |
|                                                              |
| Action  DTD Name    Document Profile          Description    |
|                                                              |
|    █     DSUTP         DSLE1        DS LAYOUT EDITOR UTP     |
|                                                              |
|                                                              |
|                                                              |
|                                                              |
|                                                              |
|                                                              |
|                                                              |
|                                                              |
|                                                              |
| MSG: █                                           applcation  |
+--------------------------------------------------------------+
```

Figure 5-21   Document Profile Form after Test E

The Unit Test for the EDS Layout Editor is now complete.

5-23